

**Notice of Allowability**

Application No.

10/750,203

Applicant(s)

LI ET AL.

Examiner

Sam K. Ahn

Art Unit

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/29/07.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

1. Authorization for this examiner's amendment was given in a telephone interview with Ms. Christina Tavoularis representing Mr. Gerald Halt on 11/12/07.

The application has been amended as follows:

In claim 1, line 4, "the steps of" has been deleted.

In claim 2, lines 1-2, "said generating step" has been changed to "said generating the set of products".

In claim 3, line 4, "the method comprising the steps of" has been changed to "wherein N is a positive integer greater than one, the method comprising".

In claim 4, lines 3-4, "the steps of" has been deleted.

In claim 7, line 4, "the steps of" has been deleted.

In claim 8, line 4, "the steps of" has been deleted.

In claim 9, line 4, "the steps of" has been deleted.

In claim 10, lines 3-4, "including the steps of" has been changed to "comprising".

In claim 11, line 3, "including the steps of" has been changed to "comprising".

In claim 12, lines 3-4, "including the steps of" has been changed to "comprising".

In claim 13, line 4, "including the steps of" has been changed to "comprising".

In claim 14, line 8, "the steps of" has been deleted.

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2. The following is an examiner's statement of reasons for allowance: present application discloses a method for demodulating M-QAM or q-ASK signal by estimating the amplitude of the received signal. Prior art teaches the limitations claimed, however, prior art does not explicitly teach the combined steps of adding the absolute values of the transmitted symbols which defines a magnitude value, generating the estimated amplitude of the received signal by dividing the real part of the sum of the product based on the received symbols by the magnitude value as recited in claim 1. Prior art further does not teach or suggest in combination of the limitation of generating a set of products of the received samples multiplied by  $\text{sign}(d_k)$  wherein  $d_k$  is the transmitted symbols, and generating the estimated amplitude of q-ASK signal by dividing a first sum by a second sum, wherein the first sum is obtained by adding the samples received samples multiplied by  $\text{sign}(d_k)$  and wherein the second sum is obtained by adding the absolute values of  $d_k$ , as recited in claim 3. Prior art also does not teach or suggest in combination of the limitation of adding the absolute values of received samples, determining mean of the added values, multiplying the mean by  $N$ , and generating the estimated amplitude of the received signal by dividing the added values by the multiplied mean by  $N$ , as recited in claim 4. And prior art does not explicitly teach or suggest in combination of the equations recited in claims 7-14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam K. Ahn  
Patent Examiner

11/12/07